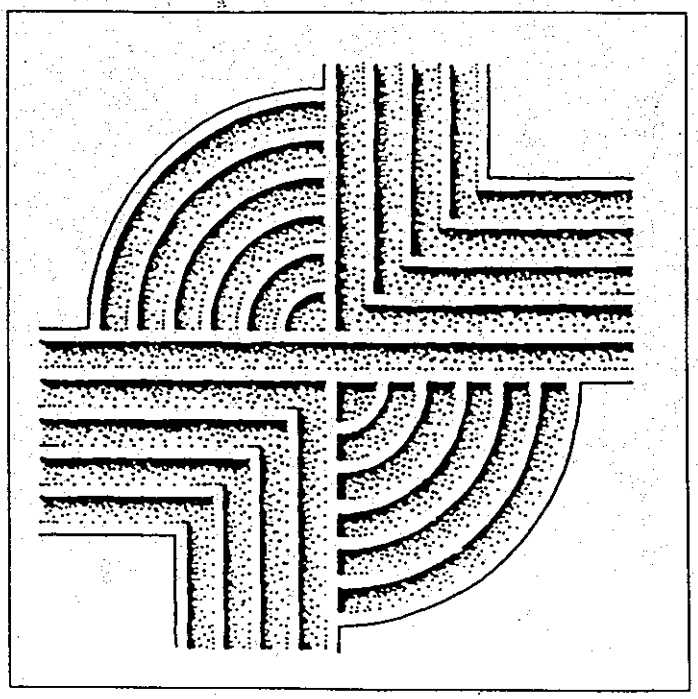
CULTURAL RESOURCES SURVEY OF PIEDMONT SAND, CHESTERFIELD COUNTY, SOUTH CAROLINA



CHICORA RESEARCH CONTRIBUTION 326

CULTURAL RESOURCES SURVEY OF PIEDMONT SAND, CHESTERFIELD COUNTY, SOUTH CAROLINA

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ABSTRACT

This study reports on an intensive archaeological survey of approximately 150 acres in the north central portion of Chesterfield County, South Carolina. The work was conducted to assist Hedrick Industries comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800.

The tract, measuring approximately 4,000 square feet, is to be mined by the B.V. Hedrick Gravel and Sand Company. The parcel is about 240 acres in extent, but due to steep slopes into lowlands, an alternate survey line was developed, eliminating the steep slopes and wetlands, and focusing on the higher probability areas, the upland ridge tops overlooking the lowlands. This survey area incorporated approximately 150 acres.

The western portion of the survey area from Thompson Creek Road is relatively level, sloping down only toward the extreme western property line. The eastern portion of the tract is also relatively level with wetlands dividing the eastern section of the survey tract into two halves.

The mining of sand and gravel from the area has the potential to affect the surrounding archaeological and historical sites which may be present in the survey area. Although Hedrick Industries is currently mining an area about 0.2 mile north of the survey area, an area of potential effect (APE) 1.0 mile around the tract was still assumed.

Consultation with the S.C. Department of Archives and History revealed no other historical properties in the APE and survey around the community confirmed this. An investigation of the archaeological site files at the S.C. Institute of Archaeology and Anthropology identified nine previously recorded archaeological sites, 38CT207, 38CT208, 38CT209, 38CT210, 38CT211, 38CT212, 38CT213, 38CT214, and 38CT215 within the APE. Of these sites, eight identified prehistoric materials and one, 38CT215, was listed as a mid-twentieth century trash site. All nine of the sites were located in the area that is currently being mined by the company; eight were considered not eligible for inclusion on the National Register of Historic Places and one was avoided by the mining operations.

The archaeological survey of the current 150 acre tract incorporated shovel testing at 100-foot intervals on transects laid out at 100-foot intervals. All shovel test fill was screened through ¼-inch mesh and the shovel tests were backfilled at the completion of the study. A total of 782 shovel tests were excavated along 92 transect lines. As a result of these investigations, one prehistoric site (38CT254) was discovered along with one isolated find (38CT00), a prehistoric point.

It is possible that more archaeological remains may be encountered in the corridor during construction. Construction crews should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office or to Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No construction should take place in the vicinity of these late discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

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INTRODUCTION

This intensive archaeological survey of the tract east of Pageland in the north central portion of Chesterfield County, South Carolina was conducted by Dr. Michael Trinkley of Chicora Foundation, Inc. for Mr. Jeff Lamm of Hedrick Industries in Asheville, North Carolina. The work was conducted to assist B.V. Hedrick Gravel and Sand Company comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800.

The project area is located off SC 9, 4.0 miles east of Pageland (Figure 1). The project site consists of a roughly pentagonal parcel of land measuring about 4,000 feet on the northwest side bordering Guess Road and 2,500 feet on the northeast side parallel to S-73. The southeast portion of the tract is about 3,000 feet long while the southwest property line is also 3,000 feet. The southern most property line runs about 3,000 feet, but starts sloping fairly steeply to the south. For this survey, we opted to cut out the steep slopes, which would be green spaced and not impacted by the quarrying activities, leaving a survey area of approximately 150 acres (Figure 2).

Topography in the survey area consists of a fairly level ridge top with steep slopes slanting into intermittent streams and wetlands. The tract's vegetation consists of a second growth of pines and hardwoods. The survey site was logged about twenty years ago, leaving tree stumps in the area. While situated about 4.0 miles east of downtown Pageland, the project area is in a rural locale marked by a handful of small houses and trailers. The region is still being used for mining and logging activities.

The parcel, as previously mentioned, is intended to be mined for its sand and gravel. Hedrick Industries has already mined an area about 0.25 mile north of this survey tract. As with the current mining facility, the proposed work for this survey tract will involve extensive clearing of the property, grubbing out of trees, and other processes dealing with the mining of sand. The work will cause complete destruction of any archaeological remains which may be present — necessitating this survey.

Operation of the mining facility may have an impact on any historic resources in the project area. As a result, this architectural survey uses an area of potential effect (APE) about 1.0 mile radius around the proposed survey tract. We believe that this APE is adequate, considering the operation of a currently mined parcel of land 0.25 mile north of the survey area.

The study, however, does not consider any future secondary impact of the project, including such things as expansion of the mining area. Again, given the extensive mining already being performed in the immediate area, it would be difficult to determine if any future developments were directly linked to this project.

We were requested by Mr. Jeff Lamm of Hedrick Industries to provide a proposal for the survey of this tract in early January and we submitted a series of proposals for the survey of the entire tract and then striking off the lowlands and slopes. Authorization to conduct a survey excluding the slopes and lowlands was provided shortly thereafter. These investigations included a review of the site files at the South Carolina Institute of Archaeology and Anthropology, as well as at the South Carolina Department of Archives and History.

There are nine previously recorded archaeological sites in the project area. Sites 38CT207, 38CT208, 38CT209, 38CT210, 38CT211, 38CT212, 38CT213, and 38CT214 were all prehistoric sites ranging from the Middle Archaic to the Woodland Period, while 38CT215 was found to be a mid-twentieth century domestic refuse site. Due to sparse scatters of materials and relatively short occupation periods, eight of these sites were recommended as not eligible for inclusion on the National Register. One site, 38CT214, produced a

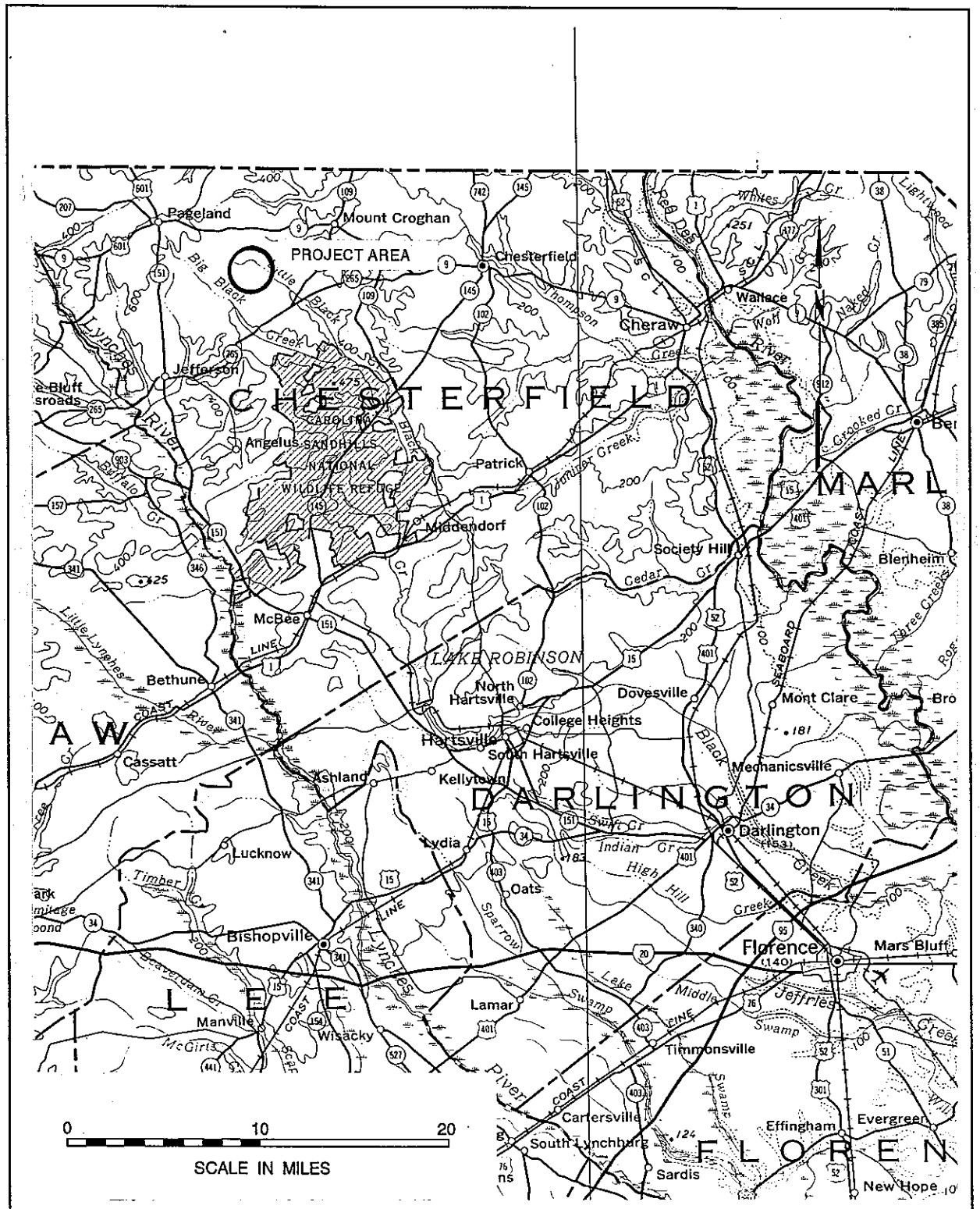

Figure 1. Project vicinity in Chesterfield County, South Carolina (basemap is USGS South Carolina (1:500,000).

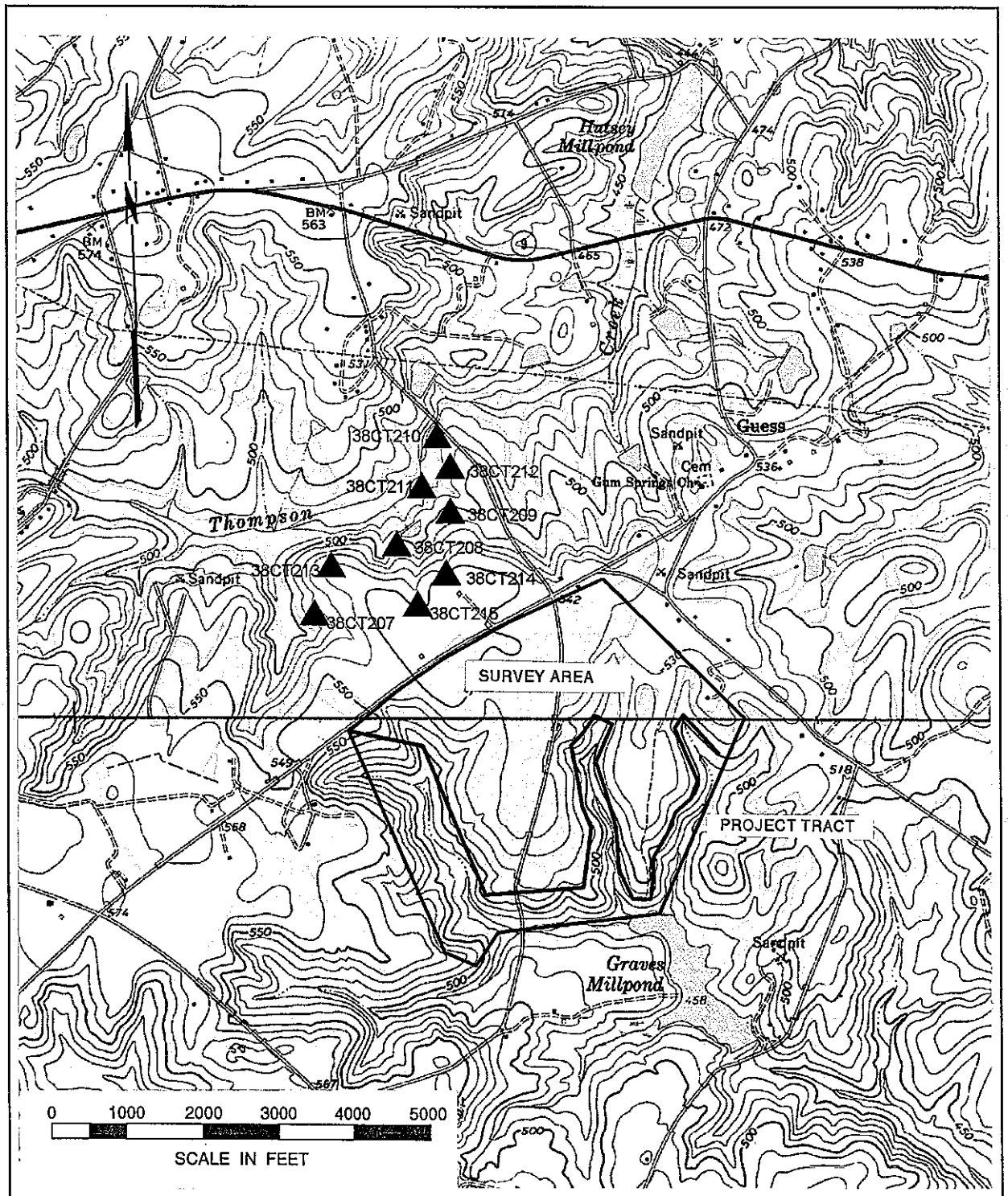

Figure 2. Project area, survey tract boundaries, and previously recorded archaeological sites in the project area (basemap is Jefferson NE and Hornsboro 7.5').

large number (50) of flakes in only two shovel tests; this site was recommended as potentially eligible and was avoided by the mining activities (Steen and Legg 1992).

The background work suggests that prehistoric sites, if present, will be found on the ridgetops, overlooking major swamp drainages. However, for the current survey area the only major drainage is Graves Millpond, outside the southeast corner of the survey area. Consequently, we did not anticipate dense prehistoric remains.

Archival and historical research was limited to a review of secondary sources available in the Chicora Foundation files, as well as research at the Department of Archives and History. Historic sites appear to be associated with major roads. None are present in the project survey tract, so it was not likely that significant historic occupations would be identified.

The archaeological survey was conducted intermittently from February 15 to March 7, 2001. The survey revealed one previously unrecorded archaeological site and one isolated find, neither of which are recommended eligible for the National Register. The architectural survey of the APE, designed to determine if there were historic sites in the APE, was conducted on February 16. As a result of this survey, no historic structures were found.

Report production was conducted at Chicora's laboratories in Columbia, South Carolina from April 2 to 4, 2001.

NATURAL ENVIRONMENT

Physiography

Chesterfield County is situated in the Fall Line and Sand Hills area of South Carolina. It is bounded to the north by Union County, North Carolina, to the east by Marlboro County, South Carolina and the Great Pee Dee River, to the south by Darlington County, South Carolina and to the west by Lancaster and Kershaw counties, South Carolina as well as Lynches River. The western half of the county is drained by Lynches River while the eastern half is drained by the Great Pee Dee. The project area itself is drained by Graves Millpond which feeds into the Lynches River.

The Fall Line Sandhills lie in a discontinuous belt 5 to 15 miles wide through the center of the Midlands, paralleling the coast. Fall Line topography is formed by the vigorous erosion of streams that pass from the piedmont bedrock to the loose sands of the coastal plain. The streams rapidly descend to form shoals in major rivers or waterfalls on small streams (Barry 1980:97).

Cooke (1936) has divided the Sandhills into the Aiken Plateau, the Congaree Sand Hills, the Richland Sand Hills, and the High Hills of the Santee. The Richland Red Hills and the High Hills of the Santee are both similar in size and morphology. These two groups are considered the "Red Sand Hills" while the remaining groups are considered the "White Sand Hills" (Colquhoun 1965). The project area is located in the Fall Line region, with the Red Sand Hills just east of the area.

Elevations in the county range from about 75 feet above sea level at the Pee Dee River to about 725 feet above sea level near the town of Pageland (Morton 1995). The survey corridor is characterized by elevations ranging from 490 to 550 feet above mean sea level (AMSL). The northern portion of the tract consists of a fairly level ridge top while the southern, western and eastern portion have a sloping topography into wet areas.

Geology and Soils

The soils in Chesterfield County were formed in material weathered from rock and in sediment that

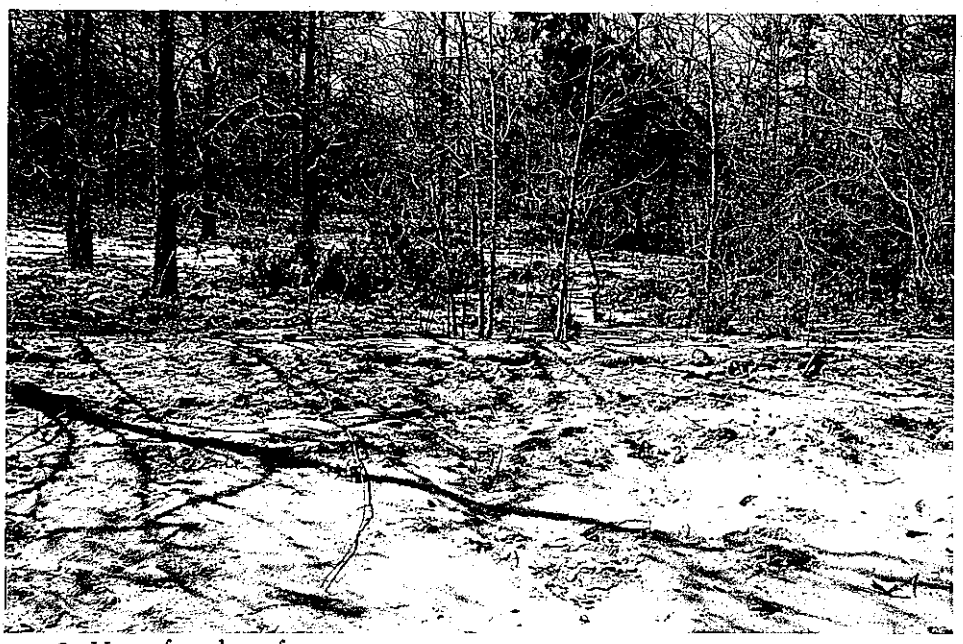

Figure 3. View of sandy surface on survey tract.

Figure 4. View of pines and hardwoods on the survey tract.

was deposited by the ocean, by streams, or successively by both. In general, the underlying rocks are crystalline and metamorphic rocks such as Carolina slate, gneiss, schist, and granite. Mills describes the soils as being poor for cultivation. He states:

> [a] large proportion of this district presents pine barren sand hills, not worth cultivation, except when intersected by streams; where a little good soil is found. Along the northern boundary the land inclines towards the clayey and stony kind, and present a rolling surface. The river lands are of a rich soil, as also those bordering the creeks, in proportion to their extent (Mills 1972 [1826]:497).

The project corridor is situated on the broad soil association of Alpin-Candor. These soils are found in the sand hills in dominantly to moderately steep landscapes. The survey tract itself contained three distinct soils, including Alpin sand, Pelion loamy sand, and Johnston sandy loam.

Alpin sands, found the most abundant on the survey tract, are generally very deep, excessively drained, rapidly permeable soils in thick beds of sandy eolian or marine sediments. These sands are usually found on broad ridgetops and side slopes. Alpin soils have a brown (10YR5/3) sand A horizon to about 0.8 foot atop a brownish yellow (10YR6/6) sand up to 1.2 foot (Morton 1995).

Pelion sands were not found as frequently as the Alpin soils. The Pelion soils occur on broad, narrow ridges, side slopes, and foot slopes within moderately well drained, slowly permeable loamy marine sediments. The A horizon of Pelion sands include brown (10YR5/3) loamy sand over a very pale brown (10YR7/3) loamy sand to 1.1 foot and a Bt horizon consisting of a yellow (10YR7/6) sandy clay loam to 1.6 foot (Morton 1995).

Johnston sandy loams were not found in the surveyed area, but are found within the tract, located closer to the wetlands, which are frequently flooded. These soils are poorly drained and found in stratified fluvial sediments. The A horizon consists of a black (10YR 2/1) sandy loam down to 2.0 feet which sits on a very dark gray (10YR3/1) sandy loam which may exist to a depth of over 3.0 feet. Soils such as this have rarely produced archaeological sites.

Some of the shovel tests noted a thin 0.1 to 0.2 foot dark gray layer just below the humus. This could be a result of the logging which occurred in the area. Portions of the survey tract were also covered by

Figure 5. View of lichen growing on the sandy surface layer in the survey tract.

a white sand (Figure 3).

Climate

Elevation, latitude, and distance from the coast work together to affect the climate of South Carolina, including the Fall Line and Sand Hills. In addition, the more westerly mountains block or moderate many of the cold air masses that flow across the state from west to east. Even the very cold air masses which cross the mountains are warmed somewhat by compression before they descend on the Piedmont and adjacent Sand Hills.

Consequently, the climate of Chesterfield County is temperate. The winters are relatively mild and the summers warm and humid. Rainfall in the amount of about 48 inches is adequate, although less than in some neighboring counties. About 27 inches of rain occur during the growing season, with periods of drought not uncommon during the summer months.

Floristics

In this region, the dominant vegetation is the white oak which is either dominant itself or in combination with loblolly pine. Other overstory trees consist of sweetgum, beech, southern red oak, post oak, mockernut hickory, and southern sugar maple. Understory vegetation is dominated by flowering dogwood, sourgum, redbud, and other smaller species such as holly and leatherwood. Herbaceous flora is generally varied, but includes many species of the xeric woodlands as well as those more prevalent in the piedmont (Barry 1980:138-140).

Currently, the vegetation on the survey area consists of a variety of vegetation, including mixed pine/hardwood forests (Figure 4) with a thick understory of vegetation, pine plantations, wetlands, and some mosses and lichens which thrive in these conditions (Figure 5). The majority of the tract is mixed pine/hardwood forests.

PREHISTORIC AND HISTORIC BACKGROUND

Prehistoric Overview

Overviews for South Carolina's prehistory, while of differing lengths and complexity, are available in virtually every compliance report prepared. There are, in addition, some "classic" sources well worth attention, such as Joffre Coe's *Formative Cultures* (Coe 1964), as well as some new general overviews (such as Sassaman et al. 1990 and Goodyear and Hanson 1989). Also extremely helpful, perhaps even essential, are a handful of recent local synthetic statements, such as that offered by Sassaman and Anderson (1994) for the Middle and Late Archaic and by Anderson et al. (1992) for the Paleoindian and Early Archaic. Only a few of the many sources are included in this study, but they should be adequate to give the reader a "feel" for the area and help establish a context for the various sites identified in the study areas. For those desiring a more general synthesis, perhaps the most readable and well balanced is that offered by Judith Bense (1994), *Archaeology of the Southeastern United States: Paleoindian to World War I*. Figure 10 offers a generalized view of South Carolina's cultural periods.

Paleoindian Period

The Paleoindian Period, most commonly dated from about 12,000 to 10,000 B.P., is evidenced by basally thinned, side-notch projectile points; fluted, lanceolate projectile points, side scrapers, end scrapers; and drills (Coe 1964; Michie 1977; Williams 1965).

The Paleoindian occupation, while widespread, does not appear to have been intensive. Artifacts are most frequently found along major river drainages, which Michie interprets to support the concept of an economy "oriented toward the exploitation of now extinct mega-fauna" (Michie 1977:124). Survey data for Paleoindian tools, most notably fluted points, is somewhat dated, but has been summarized by Charles and Michie 1992). They reveal a widespread distribution across the state (see also Anderson 1992b:Figure 5.1) with at least several concentrations relating to intensity of collector activity.

Distinctive projectile points include lanceolates such as Clovis, Dalton, perhaps the Hardaway, and Big Sandy (Coe 1964; Phelps 1983; Oliver 1985). A temporal sequence of Paleoindian projectile points was proposed by Williams (1965:24-51), but according to Phelps (1983:18) there is little stratigraphic or chronometric evidence for it. While this is certainly true, a number of authors, such as Anderson (1992a) and Oliver (1985) have assembled impressive data sets. We are inclined to believe that while often not conclusively proven by stratigraphic excavations (and such proof may be an unreasonable expectation), there is a large body of circumstantial evidence. The weight of this evidence tends to provide considerable support.

Unfortunately, relatively little is known about Paleoindian subsistence strategies, settlement systems, or social organization (see, however, Anderson 1992b for an excellent overview and synthesis of what is known). Generally, archaeologists agree that the Paleoindian groups were at a band level of society, were nomadic, and were both hunters and foragers. While population density, based on isolated finds, is thought to have been low, Walthall suggests that toward the end of the period, "there was an increase in population density and in territoriality and that a number of new resource areas were beginning to be exploited" (Walthall 1980:30).

Archaic Period

The Archaic Period, which dates from 10,000 to 3,000 B.P.[1], does not form a sharp break with the

[1] The terminal point for the Archaic is no clearer than that for the Paleoindian and many researchers suggest a terminal date of 4,000 B.P. rather than 3,000 B.P. There is also the question of whether ceramics, such as the fiber-tempered Stallings ware, will be included as Archaic, or will be included with the Woodland. Oliver, for example, argues that the inclusion of ceramics with Late Archaic

Paleoindian Period, but is a slow transition characterized by a modern climate and an increase in the diversity of material culture. Associated with this is a reliance on a broad spectrum of small mammals, although the white tailed deer was likely the most commonly exploited animal. Archaic period assemblages, exemplified by corner-notched and broad-stemmed projectile points, are fairly common, perhaps because the swamps and drainages offered especially attractive ecotones.

Many researchers have reported data suggestive of a noticeable population increase from the Paleoindian into the Early Archaic. This has tentatively been associated with a greater emphasis on foraging. Diagnostic Early Archaic artifacts include the Kirk Corner Notched point. As the climate became hotter and drier than the previous Paleoindian period, resulting in vegetational changes, it also affected settlement patterning as evidenced by a long-term Kirk phase midden deposit at the Hardaway site (Coe 1964:60). This is believed to have been the result of a change in subsistence strategies.

Settlements during the Early Archaic suggest the presence of a few very large, and apparently intensively occupied, sites which can best be considered base camps. Hardaway might be one such site. In addition, there were numerous small sites which produce only a few artifacts — these are the "network of tracks" mentioned by Ward (1983:65). The base camps produce a wide range of artifact types and raw materials which has suggested to many researchers long-term, perhaps seasonal or multi-seasonal, occupation. In contrast, the smaller sites are thought of as special purpose or foraging sites (see Ward 1983:67).

Middle Archaic (8,000 to 6,000 B.P.) diagnostic artifacts include Morrow Mountain, Guilford, Stanly and Halifax projectile points. Much of our best information on the Middle Archaic comes from sites investigated west of the Appalachian Mountains, such as the work by Jeff Chapman and his students in the Little Tennessee River Valley (for a general overview see Chapman 1977, 1985a, 1985b). There is good evidence that Middle Archaic lithic technologies changed dramatically. End scrapers, at times associated with Paleoindian traditions, are discontinued, raw materials tend to reflect the greater use of locally available materials, and mortars are initially introduced. Associated with these technological changes there seem to also be some significant cultural modifications. Prepared burials begin to more commonly occur and storage pits are identified. The work at Middle Archaic river valley sites, with their evidence of a diverse floral and faunal subsistence base, seems to stand in stark contrast to Caldwell's Middle Archaic "Old Quartz Industry" of Georgia and the Carolinas, where axes, choppers, and ground and polished stone tools are very rare.

The Late Archaic, usually dated from 6,000 to 3,000 or 4,000 B.P., is characterized by the appearance of large, square stemmed Savannah River projectile points (Coe 1964). These people continued to intensively exploit the uplands much like earlier Archaic groups with, the bulk of our data for this period coming from the Uwharrie region in North Carolina.

In addition to the presence of Savannah River points, the Late Archaic also witnessed the introduction of steatite vessels (see Coe 1964:112-113; Sassaman 1993), polished and pecked stone artifacts, and grinding stones. Some also include the introduction of fiber-tempered pottery about 4000 B.P. in the Late Archaic (for a discussion see Sassaman and Anderson 1994:38-44). This innovation is of special importance along the Georgia and South Carolina coasts, but seems to have had only minimal impact in the uplands of South or North Carolina.

There is evidence that during the Late Archaic the climate began to approximate modern climatic conditions. Rainfall increased resulting in a more lush vegetation pattern. The pollen record indicates an

attributes "complicates and confuses classification and interpretation needlessly" (Oliver 1981:20). He comments that according to the original definition of the Archaic, it "represents a preceramic horizon" and that "the presence of ceramics provides a convenient marker for separation of the Archaic and Woodland periods (Oliver 1981:21). Others would counter that such an approach ignores cultural continuity and forces an artificial, and perhaps unrealistic, separation. Sassaman and Anderson (1994:38-44), for example, include Stallings and Thom's Creek wares in their discussion of "Late Archaic Pottery." While this issue has been of considerable importance along the Carolina and Georgia coasts, it has never affected the Piedmont, which seems to have embraced pottery far later, well into the conventional Woodland period. The importance of the issue in the Sandhills, unfortunately, is not well known.

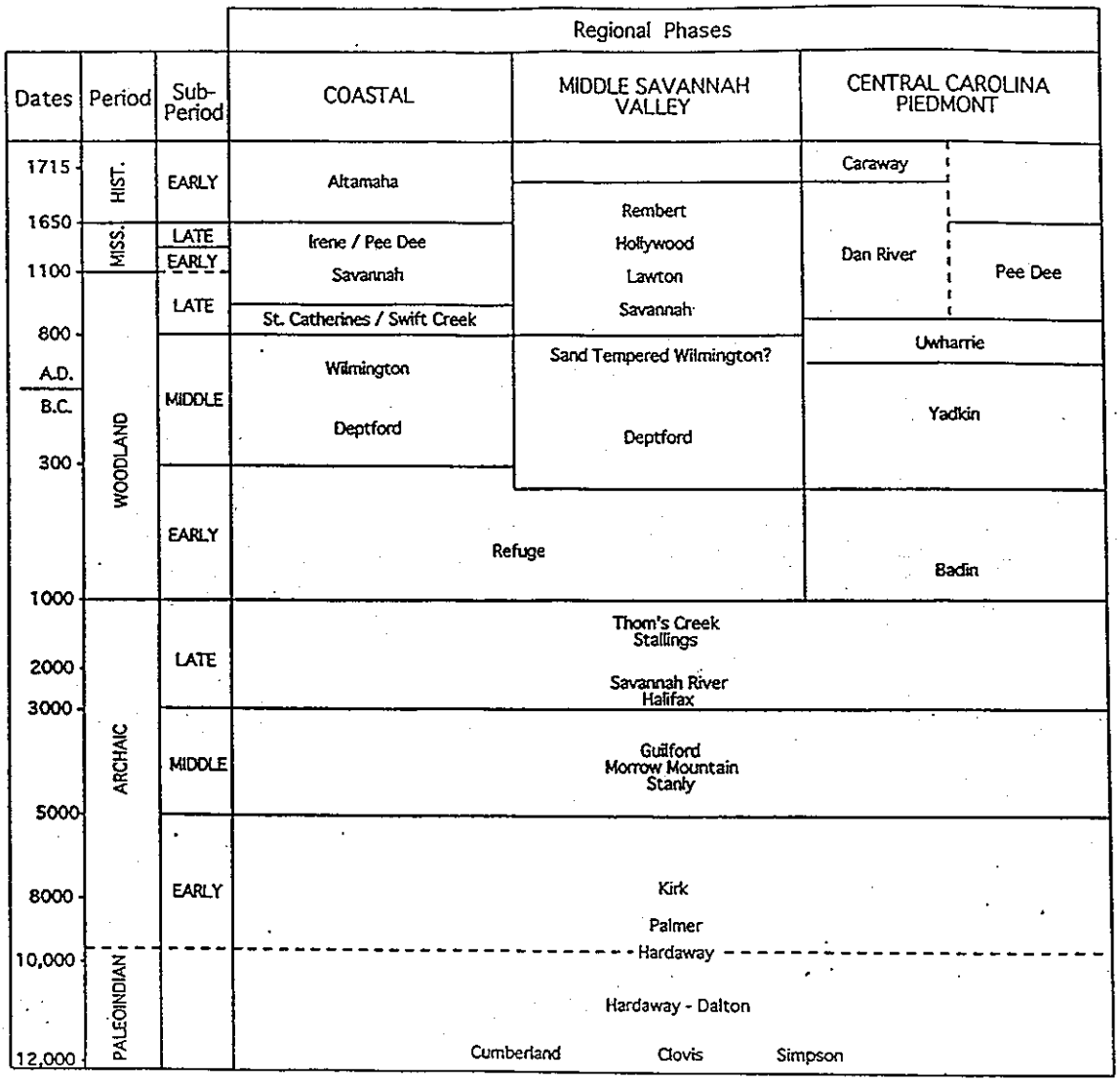

Figure 6. Generalized cultural periods for South Carolina.

increase in pine which reduced the oak-hickory nut masts which previously were so widespread. This change probably affected settlement patterning since nut masts were now more isolated and concentrated. From research in the Savannah River valley near Aiken, South Carolina, Sassaman has found considerable diversity in Late Archaic site types with sites occurring in virtually every upland environmental zone. He suggests that this more complex settlement pattern evolved from an increasingly complex socio-economic system. While it is unlikely that this model can be simply transferred to the Sandhills of South Carolina without an extensive review of site data and micro-environmental data, it does demonstrate one approach to understanding the transition from Archaic to Woodland.

Woodland Period

As previously discussed, there are those who see the Woodland beginning with the introduction of pottery. Under this scenario the Early Woodland may begin as early as 4,500 B.P. and continued to about 2,300 B.P. Diagnostics would include the small variety of the Late Archaic Savannah River Stemmed point (Oliver 1985) and pottery of the Stallings and Thoms Creek series. These sand tempered Thoms Creek wares are decorated using punctations, jab-and-drag, and incised designs (Trinkley 1976). Also potentially included are Refuge wares, also characterized by sandy paste, but often having only a plain or dentate-stamped surface (Waring 1968). Others would have the Woodland beginning about 3,000 B.P. and perhaps as late as 2,500 B.P. with the introduction of pottery which is cord-marked or fabric-impressed and suggestive of influences from northern cultures.

There remains, in South Carolina, considerable ambiguity regarding the pottery series found in the Sandhills and their association with coastal plain and piedmont types. The earliest pottery found at many sites may be called either Deptford or Yadkin, depending on the research or their inclination at any given moment.

The Deptford phase, which dates from 3050 to 1350 B.P., is best characterized by fine to coarse sandy paste pottery with a check stamped surface treatment. The Deptford settlement pattern involves both coastal and inland sites.

Inland sites such as 38AK228-W, 38LX5, 38RD60, and 38BM40 indicate the presence of an extensive Deptford occupation on the Fall Line and the Inner Coastal Plain/Sand Hills, although sandy, acidic soils preclude statements on the subsistence base (Anderson 1979; Ryan 1972; Trinkley 1980). These interior or upland Deptford sites, however, are strongly associated with the swamp terrace edge, and this environment is productive not only in nut masts, but also in large mammals such as deer. Perhaps the best data concerning Deptford "base camps" comes from the Lewis-West site (38AK228-W), where evidence of abundant food remains, storage pit features, elaborate material culture, mortuary behavior, and craft specialization has been reported (Sassaman et al. 1990:96-98; see also Sassaman 1993 for similar data recovered from 38AK157).

Further to the north and west, in the Piedmont, the Early Woodland is marked by a pottery type defined by Coe (1964:27-29) as Badin.[2] This pottery is identified as having very fine sand in the paste with an occasional pebble. Coe identified cord-marked, fabric-marked, net-impressed, and plain surface finishes. Beyond this pottery little is known about the makers of the Badin wares and relatively few of these sherds are reported from South Carolina sites.

Somewhat more information is available for the Middle Woodland, typically given the range of about 2,300 B.P. to 1,200 B.P. In the Piedmont and even into the Sand Hills, the dominant Middle Woodland ceramic type is typically identified as the Yadkin series. Characterized by a crushed quartz temper the pottery includes surface treatments of cord-marked, fabric-marked, and a very few linear check-stamped sherds (Coe 1964:30-32). It is regrettable that several of the seemingly "best" Yadkin sites, such as the Trestle site (31An19) explored by Peter Cooper (Ward 1983:72-73), have never been published.

Yadkin ceramics are associated with medium-

[2] The ceramics suggest clear regional differences duringthe Woodland which seem to only be magnified during the later phases. Ward (1983:71), for example, notes that there "marked distinctions" between the pottery from the Buggs Islandand Gaston Reservoirs and that from the south-central Piedmont.

sized triangular points, although Oliver (1981) suggests that a continuation of the Piedmont Stemmed Tradition to at least 1650 B.P. coexisted with this Triangular Tradition. The Yadkin in South Carolina has been best explored by research at 38SU83 in Sumter County (Blanton et al. 1986) and at 38FL249 in Florence County (Trinkley et al. 1993)

In some respects the Late Woodland (1,200 B.P. to 400 B.P.) may be characterized as a continuation of previous Middle Woodland cultural assemblages. While outside the Carolinas there were major cultural changes, such as the continued development and elaboration of agriculture, the Carolina groups settled into a lifeway not appreciably different from that observed for the previous 500-700 years. From the vantage point of the Middle Savannah Valley Sassaman and his colleagues note that, "the Late Woodland is difficult to delineate typologically from its antecedent or from the subsequent Mississippian period" (Sassaman et al. 1990:14). This situation would remain unchanged until the development of the South Appalachian Mississippian complex (see Ferguson 1971).

Historic Research

The early history of Chesterfield County was only briefly presented by Mills (1972 [1826]:496):

> This district was originally settled by emigrants from Virginia and Pennsylvania, about the year 1745. At that time it formed a part of Craven county, afterwards of Cheraw precincts; and now constitutes in itself an independent judicial district.

The Cheraw district was originally part of Craven County in 1682. In 1731 the township of Queensboro was laid out at the confluence of the Great Pee Dee and the Little Pee Dee Rivers to entice settlement in that region. However, settlers were slow coming in.

Welsh began settling the area in the late 1730s and other immigrants, including Scots, Irish, Germans, French, and English, soon followed. In addition, settlers from Virginia and Pennsylvania moved into the area. While subsistence based, farmers discovered that cane brakes were perfect for raising livestock. As more land was cleared, other economic sources such as lumber developed. During the colonial period the major crops were wheat, corn, and indigo.

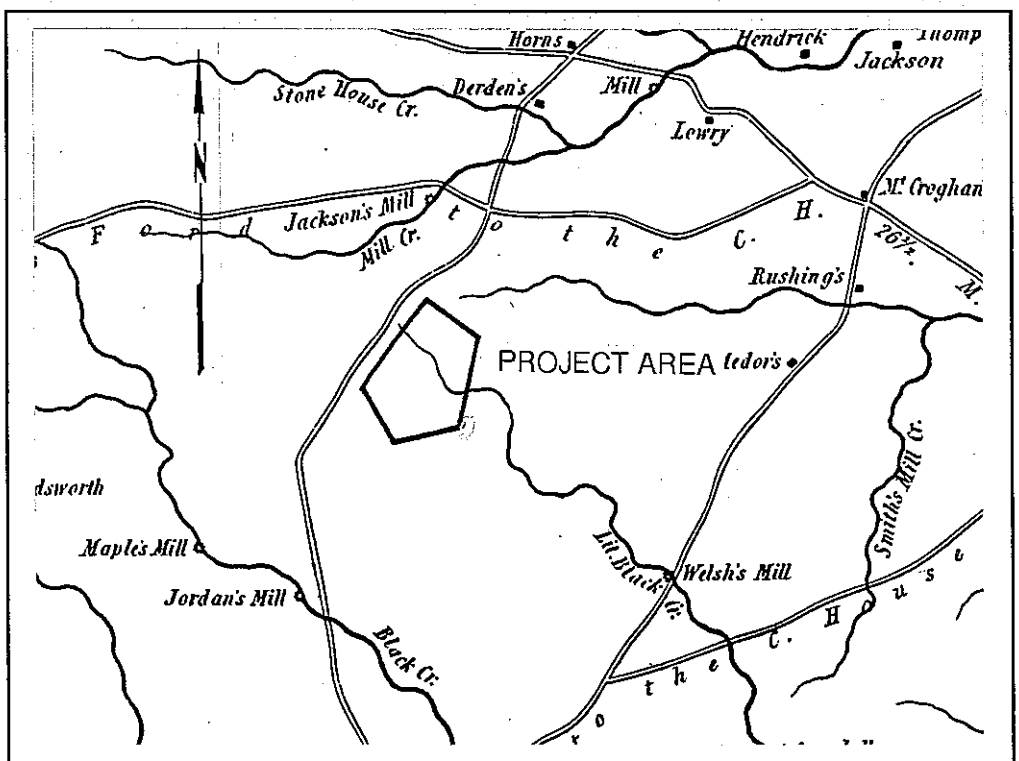

Figure 7. Mills' *Atlas* map from 1826 showing approximate survey area.

In the 1760s colonists attempted to bring law and order to the area. Colonists complained that

they were too far from existing courts and magistrates for them to be of any use. Frustrated by their unheard cries for assistance, they began taking matters into their own hands. These "regulators" allowed only writs and warrants to be served which had been given their consent.

During the American Revolution a number of skirmishes took place in the back country. British Major McArthur was stationed at Cheraw, where a number of encounters took place between he and Colonel Powell of the Continental Army. Unaccustomed to the warm subtropical climate, many of the British fell ill and died. McArthur was forced to withdraw to Lynches Creek, about two miles from Jefferson, to recuperate and received reinforcements. Other than these developments, very little war related activities took place in Chesterfield County (Gregg 1867).

After the war, the Cheraw district grew rapidly and in 1785 the district was divided into three counties: Marlborough, Chesterfield, and Darlington. Improvements were then made in the transportation system creating more roads and public ferries. By 1820 the population of the county consisted of 4,412 white and 2,333 black inhabitants (White 1972).

In 1826 the town of Chesterfield became the county seat. At this time the town consisted of 12 houses, two stores, and a new courthouse. Mills Atlas (1965 [1826]) shows the project area as containing two subscribers at that time. Most of the subscribers shown are situated along major creeks and roads which probably accurately depicts the settlement pattern in the area at that time (Figure 7).

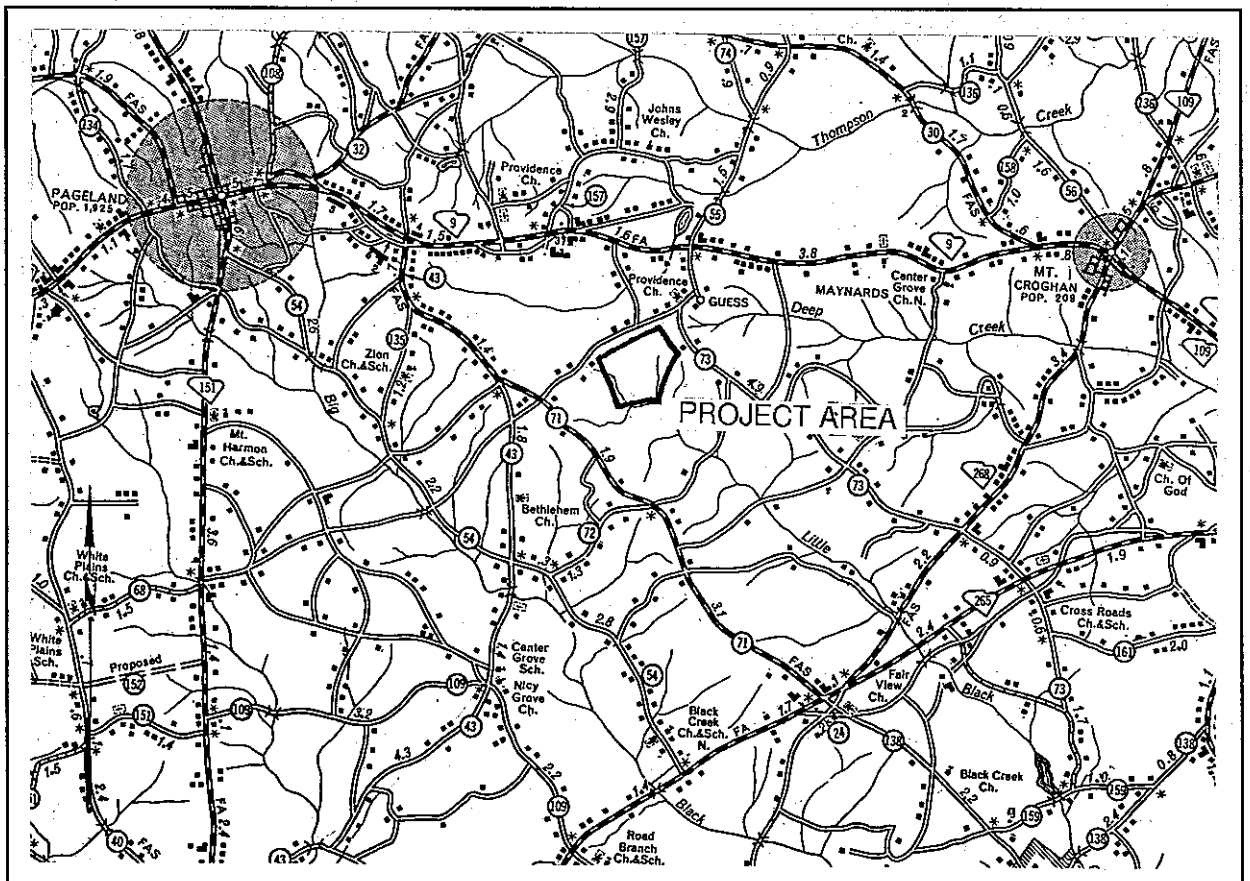

Figure 8. Portion of the 1950 General Highway and Transportation Map for Chesterfield County showing the survey tract.

Between 1820 and 1856 South Carolina saw an increase in manufacturing and business. In the late 1820s gold was discovered near Miller's Store (now Jefferson). Although some increases occurred, generally South Carolina remained a state based on subsistence farming and one crop cotton staple (Wallace 1951).

Few Chesterfield County citizens owned slaves, making the residents more like their North Carolina neighbors. Although against secession, the county sent five companies of infantry, as well as supplies, for the Confederate cause. Chesterfield County did not see much action until the last days of the war during Sherman's return from his "March to the Sea". In March of 1865 Union forces reached Chesterfield. After a skirmish with Confederate troops, a number of public buildings were burned.

After Sherman's troops reached Cheraw, they located a large number of Confederate military supplies sent up from Charleston. Sherman inventoried 24 cannons, 2000 muskets, 3600 barrels of gunpowder, and "other things" (Glatthaar 1985). Unfortunately a careless soldier caused many of the supplies to be lost in an explosion that also killed several men and wounded many more.

The arrival of the railroad can be attributed to the eventual recovery of the county. In the 1880s lines were built connecting Chesterfield County to important towns including Salisbury, North Carolina and Camden, South Carolina. During reconstruction and into 1900, small subsistence farming continued. Those larger farmers who had been dependent on slaves turned to sharecropping and tenant farming. The early 1900s brought improvements to the county, although by in large, the area was still impoverished. Cotton was still the staple crop although farmers began experimenting with growing melons, grapes, and other fruits. Chesterfield County shipped 30,000 bales of cotton in 1925 and had become the state's largest peach producer. The South Carolina General Highway and Transportation Map from 1950 shows a number of houses along the major roads and near the project area (Figure 8).

A major shift in agriculture occurred over the next several decades. By 1940 the tractor was widely used. Low cotton yields forced a conversion to soybean production in the 1960s. By the 1970s, poultry and eggs had replaced cotton as the leading income for the county. Today, agriculture remains an important part of the economy, although industry is beginning to offset its importance. Chesterfield has become one of the largest wood pulp producing counties in the state.

Previous Research

Very little archaeological research has been performed in Chesterfield County. Most of the work has been conducted at the survey level and consists of work associated with highway projects (e.g. Cable and Cantley 1979; Trinkley 1982). Other projects consist of a survey of the Carolina Sandhills National Wildlife Refuge (Wright 1978), the survey for the Arant Tract, the current mining area (Steen and Legg 1992), as well as a golf course survey at Cheraw State Park (Barker 1990).

The archaeological investigation of the mining tract to the north of the current study tract was conducted by Diachronic Research Foundation, Inc. in 1992. This investigation produced eight prehistoric archaeological sites and one mid-twentieth century refuse site. One prehistoric site, 38CT214, produced a large number of flakes, but was not tested further due to the location of the mining area. The other seven prehistoric sites produced sparse numbers of artifacts and were therefore considered not eligible for inclusion on the National Register.

There are additional archaeological investigations in Chesterfield County (see Derting et al. 1991), although these projects are largely confined road and highway widening projects.

METHODS

Field Methods

The initially proposed field techniques involved the placement of shovel tests at 100-foot intervals along transects laid out at 100-foot intervals. All soil would be screened through ¼ inch mesh, with each test numbered sequentially by transect. Each test would measure about 1.0 foot square and would normally be taken to a depth of at least 1.0 foot or until subsoil was encountered. In the areas with wetlands and steep slopes, no shovel tests would be excavated. Notes would be maintained for profiles at any sites encountered.

Should sites (defined by the presence of one or more artifacts from either surface survey or shovel tests within a 25 feet area) be identified by shovel testing, further tests would be used to obtain data on site boundaries, artifact quantity and diversity, site integrity, and temporal affiliation. These tests would be placed at 25 feet intervals in a simple cruciform pattern until two consecutive negative shovel tests were encountered. The information required for completion of South Carolina Institute of Archaeology and Anthropology site forms would be collected and photographs would be taken, if warranted in the opinion of the field investigators.

A series of 92 transects were laid out running north and south from Thompson Creek Road (Figure 9). A total of 782 shovel tests were excavated in the project area. Almost all of the shovel tests revealed soils of Alpin sands which have an A horizon of brown (10YR5/3) sand ranging from 0 to 0.8 foot in depth. This generally overlaid a brownish yellow (10YR6/6) sand subsoil. A handful of the shovel tests produced Pelion loamy sands which exhibit an A horizon of brown (10YR5/3) loamy sand from 0 to 0.6 foot overlying a very pale brown (10YR7/3) loamy sand to 1.2 foot. The subsoil encountered was typically a yellow (10YR7/6) sandy clay loam which could be as deep as 1.6 foot. Although Johnston Sandy Loams were located in the survey area, none were encountered in the shovel tests. These black (10YR2/1) sandy loams are located closer to the wetland in an area frequently flooded.

The GPS positions were taken with a Garmin GPS 12XL rover and a Garmin 21 Beacon Receiver. The Garmin 12XL tracks up to twelve satellites, each

Figure 9. Thompson Creek Road through the tract, showing topography and transects on either side of the road.

with a separate channel that is continuously being read. The benefit of parallel channel receivers is their improved sensitivity and ability to obtain and hold a satellite lock in difficult situations, such as in forests or urban environments where signal obstruction is a frequent problem. This was a vital consideration for the study area.

GPS accuracy is generally affected by a number of sources of potential error, including errors with satellite clocks, multipathing, and selective availability. Satellite clock errors can occur when the satellites's clock is off by a little as a millisecond, or when a slightly-askew orbit results in a distance error. Multipathing occurs when the signal bounces off trees, chain-link fences, or bodies of water. Multipathing was probably not a significant source of error for this study since the site area was cleared and our reading was taken in the center of the site. The source of most extreme GPS errors is selective availability (SA), the deliberate mistiming of satellite signals by the Department of Defense. This degradation results in horizontal errors of up to 100 m 95% of the time, although the error may be as much as 300 m. Nevertheless, selective availability has been turned off by the DOD. We have previously determined the 3D[1] and DGPS readings with the Garmin 12XL were identical. Therefore, we relied on 3D navigation mode, with expected potential horizontal errors of 6 m or less.

Architectural Survey

As previously discussed, we elected to use a 1.0 mile area of potential effect (APE). The architectural survey would record buildings, sites, structures, and objects which appeared to have been constructed before 1950 and which retained their integrity.

The survey was conducted by driving the public roads (typically county or state secondary roads) in the APE. As was previously discussed, there were no sites previously recorded in the APE.

[1]A basis requirement for GPS position accuracy is having a lock on at least four satellites, which places the receiver in 3D mode. This is critical – as an example, positions calculated with less than four satellites can have horizontal errors in excess of a mile, or over 1,600 m.

Site Evaluation

Sites will be evaluated for further work based on the eligibility criteria for the National Register of Historic Places. Chicora Foundation only provides an opinion of National Register eligibility and the final determination is made by the State Historic Preservation Officer at the South Carolina Department of Archives and History.

The criteria for eligibility to the National Register of Historic Places is described by 36CFR60.4, which states:

> the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and
>
> a. that are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> b. that are associated with the lives of persons significant in our past; or
>
> c. that embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> d. that have yielded, or may be likely to yield, information important in prehistory or history.

National Register Bulletin 36 (Townsend et al.

1993) provides an evaluative process that contains five steps for forming a clearly defined explicit rationale for either the site's eligibility or lack of eligibility. Briefly, these steps are:

- identification of the site's data sets or categories of archaeological information such as ceramics, lithics, subsistence remains, architectural remains, or sub-surface features;
- identification of the historic context applicable to the site, providing a framework for the evaluative process;
- identification of the important research questions the site might be able to address, given the data sets and the context;
- evaluation of the site's archaeological integrity to ensure that the data sets were sufficiently well preserved to address the research questions; and
- identification of important research questions among all of those which might be asked and answered at the site.

This approach, of course, has been developed for use documenting eligibility of sites being actually nominated to the National Register of Historic Places where the evaluative process must stand alone, with relatively little reference to other documentation and where typically only one site is being considered.

Laboratory Analysis

The cleaning and analysis of artifacts was conducted in Columbia at the Chicora Foundation laboratories. These materials have been catalogued and accessioned for curation at the South Carolina Institute of Archaeology and Anthropology, the closest regional repository. The site form for the identified archaeological site (38CT254) and isolated find (38CT00) has been filed with the South Carolina Institute of Archaeology and Anthropology. Field notes have been prepared for curation using archival standards and will be transferred to the South Carolina Institute of Archaeology and Anthropology as soon as the project is complete.

Analysis of the collections followed professionally accepted standards with a level of intensity suitable to the quantity and quality of the remains. The diagnostic lithic remains were compared to published typological descriptions for the various projectile points such as Coe (1952, 1964), Oliver (1981), and South (1959). In general, the temporal, cultural, and typological classifications of historic remains follow such authors as Price (1970) and South (1977).

RESULTS

Introduction

The intensive shovel testing at the 150 acre tract identified one prehistoric archaeological site, 38CT254, and one isolated find, 38CT00 (Figure 10). The site is a lithic scatter of flakes and the isolated find consists of a single Stanly projectile point. Neither is recommended eligible for inclusion on the National Register of Historic Places. No additional management activities are recommended for these finds.

Identified Archaeological Sites

38CT254

Site 38CT254 consists of an extremely sparse surface scatter deposited on the sides of Thompson Creek Road in an area 450 feet north-south by 100 feet east-west. Material recovered includes metavolcanic and quartz flakes, with one metavolcanic flake evidencing use. No diagnostic artifacts were found.

In addition to the extensive surface survey, ten shovel tests were placed in the area along transect lines on both sides of the road. After identification of the site, three more tests between Transect 38 and Transect 44 were excavated, so that the west bank of the road in this area was uniformly tested on 50 foot intervals (Figure 11). One more test was placed evenly between Transect 43 and Transect 45. All shovel tests in the site area were negative. Tests were typically one square foot or more in width and ranged from 1.5 to 2.5 feet in total depth. This depth was due to soil redeposition on the shoulder of the road.

Soils in the general area are Alpin-Candor sands. Profiles in the less disturbed areas of the site are consistent with the characteristics (brownish (10YR5/3) sand to brownish yellow (10YR6/6) sand subsoil) of this series. Dirt piled on the shoulder has a much deeper A horizon, while some of the right of way on the east roadside has been bulldozed for water line construction and the pale brown (10YR7/3) topsoil is largely stripped away. 38CT254 has a surface visibility of nearly 100% throughout the road and up to about 30 feet east and west off each side.

The surrounding area is mostly pine and some small hardwoods. While the survey tract ranges from mostly flat to steeply sloped, the site area itself is relatively level, high ground. 38CT254 has an elevation of roughly 540 feet AMSL. It is situated on a ridge top overlooking a tributary creek of Graves Millpond approximately 500 feet east. 38CT254 is about 1.45 miles south of SC 9 and the central UTM coordinates are 562919E 3845229N (NAD27 datum).

In order to assess eligibility for listing on the National Register of Historic Places for 38CT254, several components should be examined. The first integral component is archaeological site integrity. This site has been heavily and repeatedly damaged. A road has been cut through and frequently scraped, in addition, water line construction has damaged the site area east of the road. The site and surrounding areas are heavily littered (Figure 12). It is unlikely that intact subsurface features remain.

Data sets present should also be considered. The context of these flakes is somewhat in question, due to the site damage. Only non-diagnostic surface flakes were encountered, so the site is characterized by a superficial collection of debitage. Whether this is the in situ location or a secondary deposit is not clear. Density of artifacts is low and the variety of data sets is limited.

Consequently, it seems unlikely that further study of 39CT254 would yield litle or no significant archaeological information or insight into the prehistory of the area. We recommend 38CT254 as ineligible for the National Register and no further management activity is recommended, pending the review of the

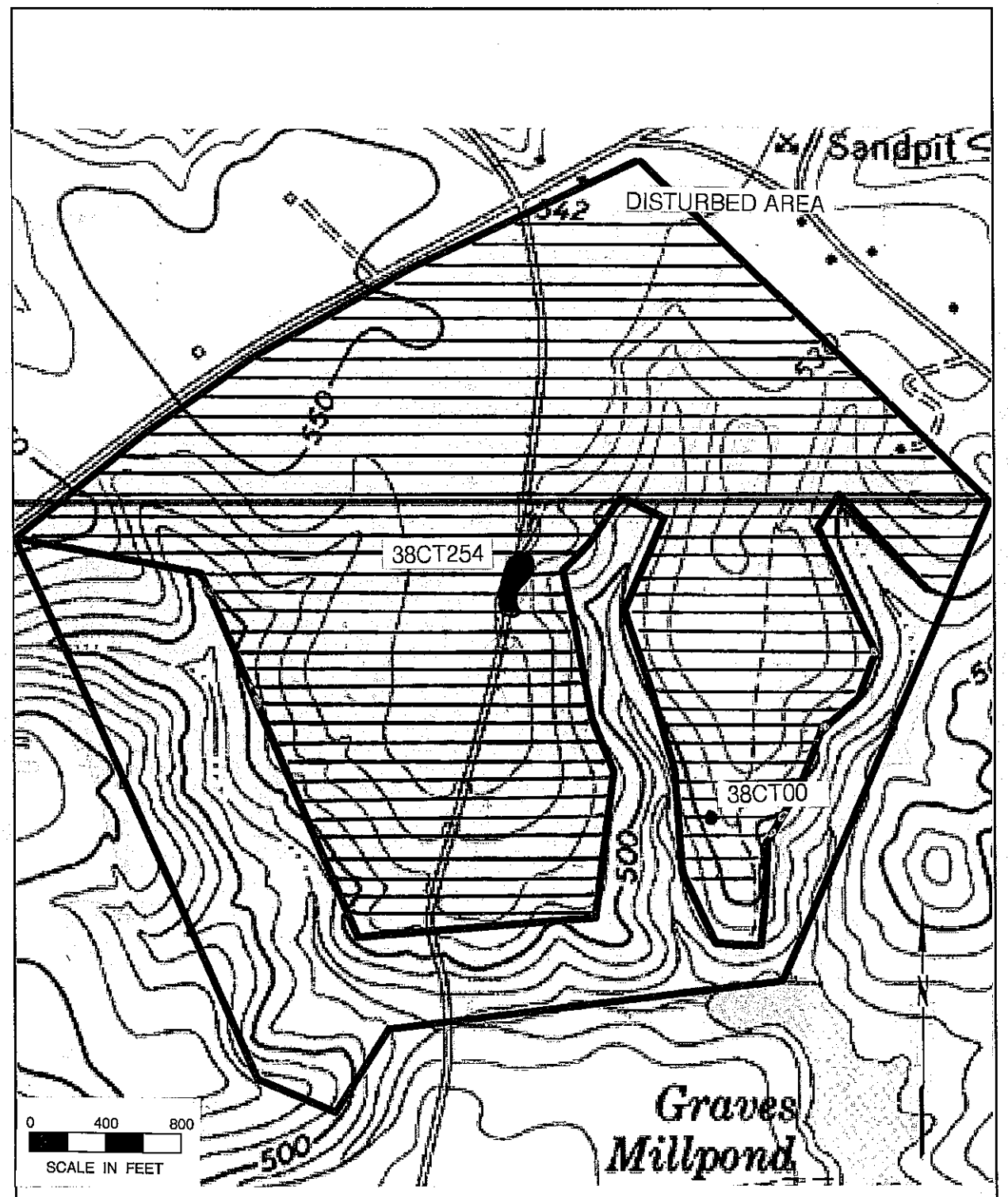

Figure 10. Survey tract showing transects and identified sites.

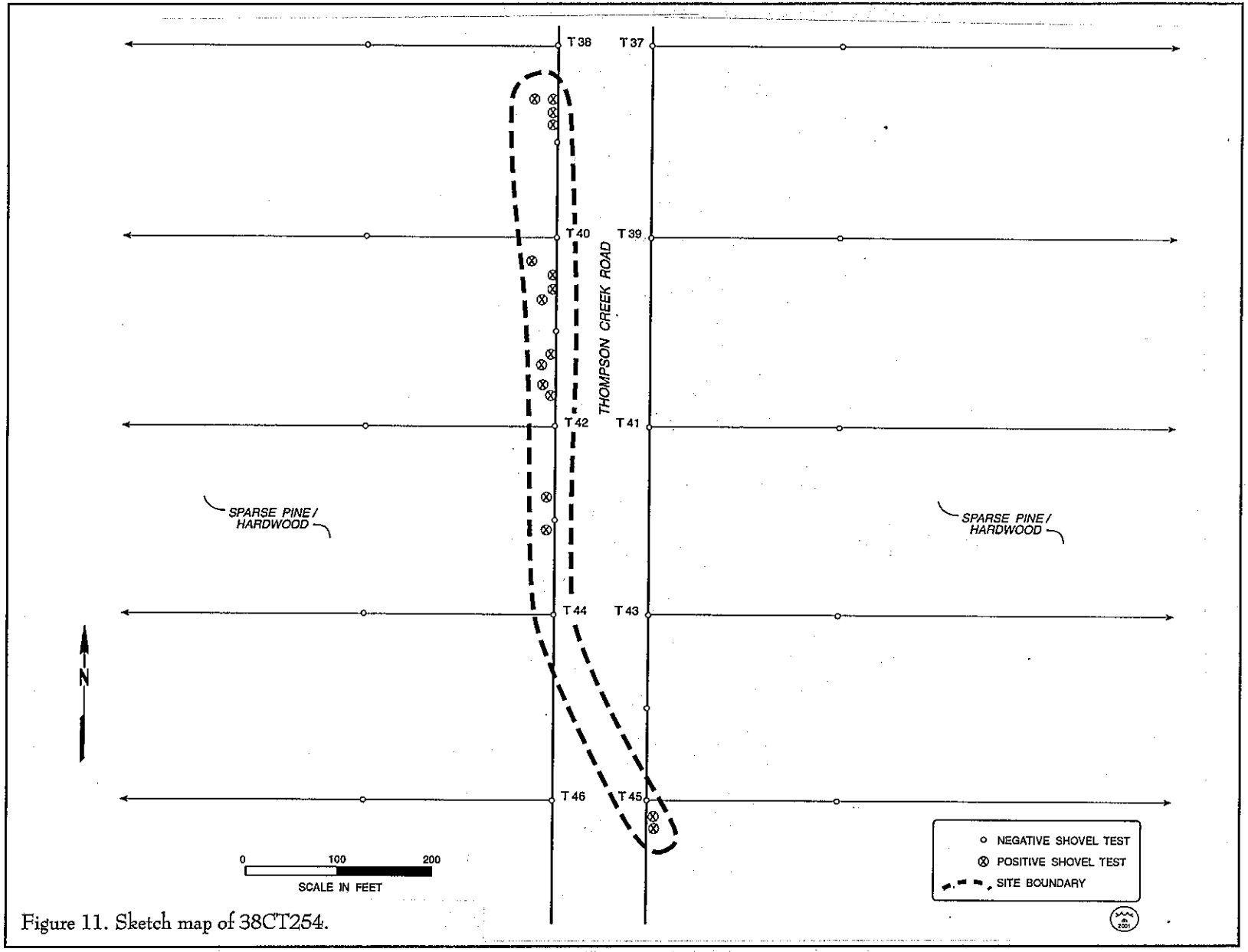

Figure 11. Sketch map of 38CT254.

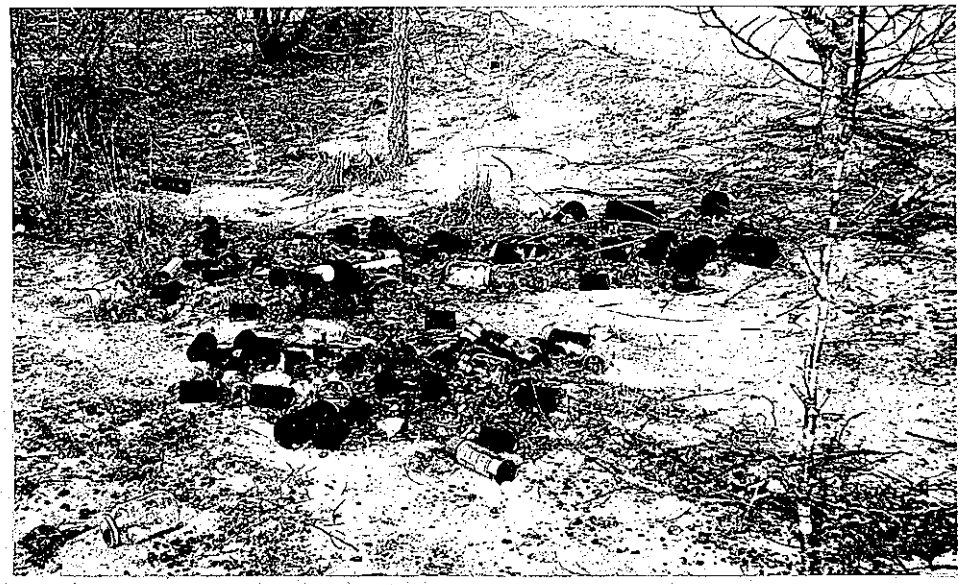

Figure 12. View of trash on site 38CT254.

State Historic Preservatio Office.

38CT00

38CT00 consists of a single positive shovel test from Transect 89, Shovel Test 2, that yielded one heavily used Stanly projectile point (Figure 12). The point measures 13.7 mm in width at the base and has a maximum blade width of 18.3 mm. The blade tip has been broken. Estimated total length of the point is about 48.5 mm.

Approximately located, 38CT00 is 1.5 miles south of SC 9 (east of Pageland, South Carolina) and 3,400 feet south-southeast of the intersection of Thompson Creek Road and Guess Road. The area is situated on a ridge side slope overlooking a tributary of Graves Millpond in a low area 200 feet east. The central UTM coordinates are 563265E 3844906N, using the NAD 27 datum.

The area's topography gently slopes down to the west-southwest from an elevation of 510 feet AMSL. The surrounding area is newly forested, including young pines, hardwoods, and undergrowth. Soils are typified as Alpin sands and exhibit a brownish A horizon to a yellowish sandy subsoil at slightly less than one foot.

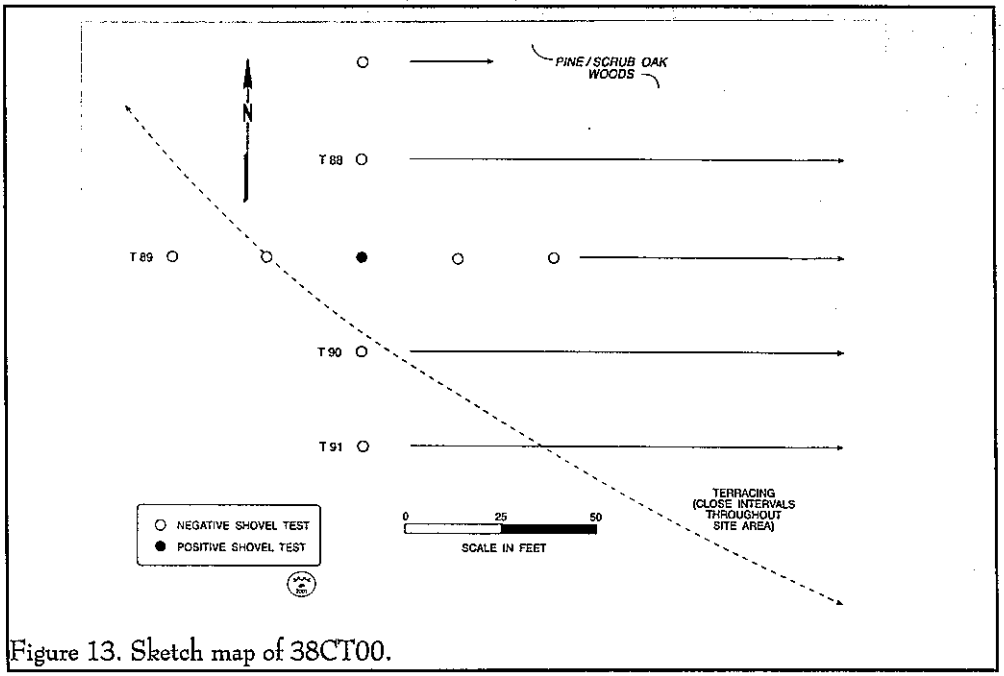

Figure 13. Sketch map of 38CT00.

subsoil at slightly less than one foot. Generally, these were from 10YR, value 4-5, chroma 1-3, to 10YR value 5-7, chroma 3-8 as defined by the Munsell Soil Chart.

Eight more shovel tests placed around the initial find in a cruciform (north-south/east-west) pattern on uniform 25 foot intervals. Some tests were taken deeper (up to 1.5 feet) in anticipation of finding additional artifacts in the yellow sand. These tests failed to produce any additional diagnostic data sets.

38CT00 lacks the artifact quantity and quality necessary to be considered eligible for listing on the National Register of Historic Places. Further, 38CT00 can not be designated as an archaeological site because it has produced only one item. It is unlikely that further study would yield additional data significant to understanding of Middle Archaic prehistory. 38CT00 is recommended not eligible for the National Register and no further management activity is recommended.

SUMMARY AND RECOMMENDATIONS

This study involved the examination of 150 acres of a 240 acre tract east of Pageland in Chesterfield County, South Carolina. The area is to be mined by the B.V. Hedrick Gravel and Sand Company. This work, conducted for Hedrick Industries, is intended to examine the archaeological sites found on the proposed tract, as well as historic sites which are within a 1.0 mile area of potential effect (APE). This report is intended to assist Hedrick Industries and its clients comply with their historic preservation responsibilities.

The proposed work will result in extensive clearing, grubbing, grading, and eventual mining, which will completely destroy any archaeological sites which may be present on the survey tract. The work may also modify the visual surroundings of any historic properties in the APE, although the area has been impacted by an existing mining area.

The surrounding area has been intensively logged in the past, but much of the area today is rural farmland. The survey tract itself is a second growth of pines and hardwoods with areas of dense woods to fairly clear, sandy areas. The areas of steep slopes and wetland were not tested, but for the other areas, shovel tests were conducted at 100 foot intervals along transects spaced 100 feet apart. These tests confirmed the soil profiles consistent with Alpin sands.

As a result of the archaeological survey of Piedmont Sand, one site, 38CT254, and one isolated find, 38CT00, were discovered. Site 38CT254 revealed a surface scatter of unidentified prehistoric flakes. Shovel testing uncovered no further artifacts, but did document the low integrity of the site, which has been bulldozed to widen or maintain an existing roadway. The artifacts recovered offer limited data sets, finding only nondiagnostic flakes. We recommend the site not eligible for inclusion on the National Register and recommend no additional management activities.

The isolated find, 38CT00, consists of a single Stanly projectile point from Transect 89, Shovel Test 2. Close interval testing performed at 25 foot intervals revealed no further subsurface materials. Isolated finds such as this are traditionally considered not eligible for inclusion on the National Register and we concur with this assessment.

In addition to the archaeological investigations, a survey of historic sites was also conducted within the 1.0 mile APE. This study failed to identify any structures within the APE which were over 50 years in age and which retained their integrity. The structures in the APE consisted of modern buildings and trailers.

It is possible that archaeological remains may be encountered in the survey tract during construction. Construction crews should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the South Carolina State Historic Preservation Office or Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No future land altering activities should take place in the vicinity of these late discoveries until they have been examined by an archaeologist, and, if necessary, have been processed according to 36CFR800.13(b)(3).

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